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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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NIXON & VANDERHYE P.C.
8th Floor
1100 North Glebe Road
Arlington, VA 22201

EXAMINER

JOLLEY, KIRSTEN

ART UNIT PAPER NUMBER

1762

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,648

Applicant(s)

PEYTOUR, NORBERT

Examiner

Kirsten C Jolley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/11/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in the reply filed on September 13, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 10-11 have been withdrawn from consideration.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-9 and 12-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 3 of claim 1, and in line 4 of claim 12, the phrase "in real time" renders the claims vague and indefinite because it is not clear what is meant by this phrase, nor does the specification clarify what is meant.

Claims 6, 7, 17, and 18 are vague indefinite because they state "the relief inscription *may* constitute... [emphasis added]" and it is not clear whether the limitation is required or not. The Examiner suggests using more definite claim language.

Claims 7 and 18 recite the limitation "other codes" in line 2. There is insufficient antecedent basis for this limitation in the claim. Further, Applicant needs to set forth the first set of codes.

Claims 8 and 19 recite the limitation "the print heads" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Further, claims 9 and 20-22 are vague and indefinite because they are worded to set forth apparatus limitations, however it is noted that the claims are directed to an inscription *method*.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 5, 8-9, 12, 16, 19-20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Titterington (US 4,992,304).

Titterington discloses a method of applying printing (which may be in the form of an inscription) in relief to substrates made of plastic (col. 8, lines 52-65) comprising: depositing phase change ink, which is a plastic material having variable viscosity (depending on temperature); and cooling the coating material upon contacting the substrate (col. 1, lines 11-17 and col. 6, lines 59-64). Titterington teaches that four different inks are deposited at 300 drops/inch by a drop-on-demand ink jet printer driven by a piezoelectric ceramic disc operating at 10,000 pulse/second and at a temperature of 150 C (col. 10, lines 1-6). Titterington also

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teaches that substrate may comprise an adhesion promoter layer between the ink image layer and the substrate to "impart a high degree of affinity for bonding between the ink image layer to the impermeable substrate" (col. 9, lines 10-33). For the purpose of rejection, the substrate is considered to be the plastic substrate and plastic adhesion promoter layer thereon. Therefore, Titterington teaches depositing the printing ink in real time in a single operation at a sufficient temperature to ensure a physical-chemical bond with the substrate.

With respect to claims 5, 8, 9, 12, 16, 19-20, and 22, it is noted that the piezoelectric ink jet printer of Titterington which prints 300 drops/inch and has a plurality of ink reservoirs/tubes necessarily includes: controlling a number of vibrating elements in the form of tubes supplied with fluidized plastic material from a reservoir; controlling and synchronizing the vibration of the tubes at frequencies to produce the deposition of drops of fluidized plastic material at the places necessary for a number of deposited drops to form a raised area; passing the substrates in front of print heads; controlling the positioning of the drops in a direction transverse to that of the movement of the substrates; and controlling the ejection duration. The process of Titterington also necessarily includes means for performing the above operations. (It is noted that Figures 1 and 2 illustrate that the solidified ink of Titterington forms a raised area compared to the surface of the substrate.)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Titterington as applied to claims 1-20 and 22 above, and further in view of Spehrley, Jr. et al. (US 4,751,528).

Titterington lacks a teaching of using a cooling means in its phase change ink jet printing method. Spehrley, Jr. et al. is cited for its teaching of an ink jet printing apparatus for printing hot melt/phase change inks comprising cooling means to maintain the platen temperature at a desired level, and also a secondary cooling means to solidify hot melt ink in a selected zone more rapidly (see Abstract and col. 6). The method of Spehrley, Jr. et al. provides precise temperature control of the printing process in order to control penetration of the phase change inks into a substrate. It would have been obvious to have incorporated the temperature control mechanism of Spehrley, Jr. et al. in the phase change ink jet printing method of Titterington, including the use of cooling means, with the expectation of controlling the penetration of its phase change inks into the substrate.

8. Claims 1-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curiel (US 6,655,598) in view of Titterington.

Curiel is cited for its teaching of a method of creating a tamper resistant informational article, such as for use as an identification card/badge or smart card or other informational card having magnetic media therein (col. 5, lines 43-54). Curiel discloses one step of its detailed method of printing information on a lens substrate, which is a resinous plastic film such as polyester (col. 7, lines 60-62), by ink jet printing (col. 12, lines 41-49 and col. 13, lines 53-61). Curiel lacks a teaching of the specific ink jet printing process used, or the types of inks used.

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One skilled in the art would have been motivated to look to the prior art for a conventional means of ink jet printing on a resinous plastic substrate such as polyester. Titterington discloses such a method, and is applied for the reasons discussed above in section 5. It would have been obvious for one having ordinary skill in the art to have used the piezoelectric ink jet printing method of Titterington to apply information on plastic lens substrate in the method of Curiel since Titterington teaches achieving excellent adhesion of the printing to the plastic substrate and since Curiel is not limited to particular printing methods or materials.

It is noted that Curiel also teaches that bar codes may also be applied in the informational articles of its invention.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baker et al. (US 5,891,228) is cited for its teaching of applying bar code patterns by hot melt ink jet printing.

Lerman et al. (US 4,073,992) is cited for its teaching of applying a plastic powder coating to a plastic substrate and heating to fuse the coating powder to each other and to the substrate.


Curtis (US 3,914,485) is cited for its teaching of forming plastic relief coatings on a plastic substrate.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kirsten C Jolley
Primary Examiner
Art Unit 1762

kcj